Claims:

1. Method for producing a strip the width of which is defined by the two longitudinal edges thereof, which is made of at least one first metallic or predominantly metallic material, and in which the region, across which the first material extends, is provided with a boundary area (38a, 38b, 38c) that extends in staggered manner between the two longitudinal edges (36, 37) over the cross-section of the strip,
characterized by the steps of

(a) combining strips (31, 32, 34) of different widths, which contain the first material and which as such do not comprise a staggered boundary area between their two longitudinal edges, to form a first arrangement of strips having a staggered boundary area;

(b) complementing the first arrangement of strips by one or more additional strips (33, 35) to form a second arrangement of strips having a rectangular cross-section; and

(c) bonding at least the strips (31, 32, 34) of the first arrangement of strips to each other by rolling.

2. The method as defined in Claim 1, **characterized in that** the steps (a) and (b) are carried out simultaneously.

3. The method as defined in Claim 1 or Claim 2, **characterized in that** two cylindrical working rolls (2,3) are used for rolling, which define between them a nip, and that the different strips (31 to 35) from which the second arrangement of strips is formed are united only in or shortly before the nip.

4. The method as defined in any of Claims 1 to 3, **characterized in that** rolling is carried out as a cold-roll plating operation.

5. The method as defined in any of Claims 1 to 3, **characterized in that** rolling is carried out as a hot-roll plating operation.

6. The method as defined in Claim 4 or Claim 5, **characterized in that** the strip is equalized by an additional rolling operation after the roll-plating process.

7. The method as defined in Claim 6, **characterized in that** the strip is wound up only after the equalization process.

8. The method as defined in Claim 6 or Claim 7, **characterized in that** the strip is equalized between two equalizing rolls (14) arranged downstream of the working rolls (2, 3).

9. The method as defined in any of the preceding claims, **characterized in that** an intermediate layer, acting as intermediary in the bonding process, is arranged between the strips (31, 32, 34) of the first arrangement of strips if and to the extent these cannot be bonded immediately by rolling.

10. The method as defined in Claim 9, **characterized in that** a separate strip is introduced into the first arrangement of strips for forming the intermediate layer.

11. The method as defined in Claim 9, **characterized in that** the intermediate layer is bonded onto one or more of the strips (32, 34) that form the first arrangement of strips, before they are united to form the first arrangement of strips.

12. The method as defined in Claim 11, **characterized in that** the intermediate layer is galvanically separated onto one or more of the strips (32, 34) that form the first arrangement of strips.

13. The method as defined in any of Claims 9 to 12, **characterized in that** the intermediate layer is selected to be thinner than the strips (31, 32, 34) that are to be connected by it.

14. The method as defined in any of Claims 9 to 12, **characterized in that** the intermediate layer is selected to be very much thinner than the strips (31, 32, 34) that are to be connected by it.

15. The method as defined in Claim 12, **characterized in that** the intermediate layer is applied by separation in a thickness of 10 µm maximally.

16. The method as defined in Claim 12, **characterized in that** intermediate layer is applied by separation in a thickness of 5 µm maximally.

17. The method as defined in any of the preceding claims, **characterized in that** the material of one, more of all additional strips (26, 30, 33, 35) that complement the first arrangement of strips to form the second arrangement of strips is selected to ensure that it will form no or only a considerably weaker bond with the strips of the first arrangement of strips by the rolling operation than the strips (31, 32, 34), and that these additional strips (26, 30, 33, 35), whose material is selected in the described way, is removed from the second arrangement of strips after the rolling process.

18. The method as defined in Claim 17, **characterized in that** following the nip, the additional strips (26, 30, 33, 35) to be removed are pulled in a different direction than the composite strip to be produced, showing the stronger bond and contained the first arrangement of strips, and that the

additional strips (26, 30, 33, 35) to be removed are removed in this way from the rolled second arrangement of strips.

19. The method as defined in Claim 18, **characterized in that** at the point (A, B) where the additional strips (26, 30) to be removed separate from the composite strip (28) showing the stronger bond, guide surfaces are provided between that composite strip (28) and the one or more strips (26, 30) to be removed, which support the guiding effect that moves the strips in the respective direction of tension.

20. The method as defined in Claim 19, **characterized in that** the guiding surfaces form one or more wedges (80).

21. The method as defined in any of Claims 6 to 8, in conjunction with any of Claims 17 to 20, **characterized in that** the equalizing process is carried out after at least one of the additional strips (26) has been removed from the rolled second arrangement of strips.

22. The method as defined in any of Claims 6 to 8, in conjunction with any of Claims 17 to 20, **characterized in that** the equalizing process is carried out after all additional strips have been removed from the rolled second arrangement of strips.

23. The method as defined in any of Claims 1 to 16, **characterized in that** the material of the one or of the additional strips (33, 35) is selected to be different from the first material and that all strips (31 to 35) of the second arrangement of strips are bonded together by the rolling process.

24. The method as defined in any of the preceding claims, **characterized in that** the strips used are strips which, apart from a plated layer which is thin compared with the thickness of the respective strip and which is to

produce the bond during the rolling process, consist of a single material in their entirety.

25. The method as defined in Claim 24, **characterized in that** strips consisting of a homogenous material are used.

26. The method as defined in any of the preceding claims, **characterized in that** the strip is subjected to a heat-treatment after the rolling operation.

27. The method as defined in any of the preceding claims, **characterized in that** the first arrangement of strips comprises at least two strips (44, 46; 45, 46) arranged one beside and in parallel to each other so that their neighboring flanks are in contact with each other,
that the material properties of the flanks to be connected are determined in such a way that the contacting flanks can be caused by heating to form a material bond,
and that the at least two strips (44, 46; 45,46) are heated, at least in the are of their contacting flanks, to a temperature at which those flanks will then immediately form a material bond one with the other.

28. The method as defined in Claim 27, **characterized in that** the second arrangement of strips is guided during the rolling operation so that its strips are prevented from moving to the side in the nip.

29. The method as defined in Claim 27 or Claim 28, **characterized in that** the material properties of the flanks to be bonded one to the other are selected to be different so that, when the contacting flanks are heated, an alloy will form whose melting point is lower than the melting point of the strips (44, 46; 45,46) to be connected in pairs at their flanks.

30. The method as defined in Claim 27 or Claim 28, **characterized in that** at least one of the strips (44, 46; 45, 46) to be connected in pairs at their flanks has the respective flank coated with a solder.

31. The method as defined in Claim 30, **characterized in that** at least one of the two strips (44, 46; 45, 46) is coated with the solder only on the respective flank.

32. The method as defined in Claim 30 or Claim 31, **characterized in that** the at least one strip (44, 45) is coated on its respective flank with a first metal, and the other strip (46) is coated on its respective flank with a second metal and that as a result of the heating process these metals form the lower melting point alloy.

33. The method as defined in any of Claims 30 to 32, **characterized in that** the respective flank is coated using a galvanic process.

34. The method as defined in any of Claims 27 to 34, **characterized in that** the strips (44, 46; 45 46) are pressed together by their flanks facing each other in the nip.

35. The method as defined in any of the preceding claims, **characterized in that** the rolling process is carried out using a reduction per pass of 50 %.

36. The method as defined in Claim 35, **characterized in that** the rolling process is carried out using a reduction per pass of 60 % to 80 %.

37. The method as defined in any of Claims 26 to 34, **characterized in that** the strips (44, 46; 45, 46) and/or the first or the second arrangement of strips are heated up after rolling to the temperature at which the flanks will be connected by a material bond.

38. The method as defined in Claim 37, **characterized in that** the first arrangement of strips is wound up continuously after rolling and is then heated.

39. The method as defined in Claim 37, **characterized in that** the strips (44, 46; 45, 46) and/or the first or the second arrangement of strips are heated immediately after rolling.

40. The method as defined in Claim 39, **characterized in that** the strips (44, 46; 45, 46) and/or the first or the second arrangement of strips are passed through a heating zone at the same speed at which they leave the nip.

41. The method as defined in any of Claims 27 to 34, , **characterized in that** the strips (44, 46; 45, 46) in the first or the second arrangement of strips are heated up before the rolling operation to the temperature at which their flanks will form a material bond between them.

42. The method as defined in Claim 41, **characterized in that** the strips (44, 46; 45, 46) in the second arrangement of strips are heated immediately before rolling and are then rolled in hot condition.

43. The method as defined in Claim 41 or Claim 42, **characterized in that** the first and the second arrangement of strips are guided already in the zone where they are heated so that their strips will not more to the side.

44. Method in which one or more of the strips produced according to any one of Claims 1 to 25 are used once more in a method according to any of Claims 1 to 25 for producing a more complex strip.